across for examination, projected the seed into his face while the capsule was being examined with a lens, indicating a projecting power not before known to exist in the species.

NOVEMBER 23.

Mr. JOHN H. REDFIELD in the chair.

Nineteen persons present.

Manganese Zinc Serpentine from Franklin, N. J.—Prof. GEORGE A. KOENIG placed on record the determination of a manganese zinc serpentine from Franklin, N. J. The material was collected in summer, 1885, as a very peculiar *Willemite*, so called at the mine. It is a very compact mineral substance, having a dark brown dull color and subconchoidal fracture, the splinters resembling horn chips. It is translucent on the edges, and when ground into a thin plate transmits a uniform brown-yellow light. Under the microscope this section of the purest material shows strings of minute black grains. Between two crossed nicol prisms the section appears light, proving a crystalline structure other than isometric. But a few grains, a light yellow in ordinary light, behave like an isometric substance, and are probably grains of yellow garnet, which is one of the associate minerals. Spec. gr. = 2·635. It is decomposed by sulphuric acid like Serpentine.

The mean of two well-agreeing analyses gave

SiO^2	= 42·20 (including 0·298 MgO, 0·2 ZnO).
Fe^2O^3	= 2·80
MnO	= 7·44
ZnO	= 3·90
MgO	= 29·24
H_2O	= 14·04
	99·62

Let Fe^2O^3 be supposed to be present as Franklinite, requiring 0·8 ZnO and 0·53 ZnO, then we have 4·15 per cent. of Franklinite mixed with the silicate, and the composition is now

SiO^2	= 41·70 : 1·390	
MgO	= 29·24 : 1·462	1·733
MnO	= 6·91 : 0·194	
ZnO	= 3·10 : 0·077	
H^2O	= 14·04 : 1·533	
Franklinite	= 4·15	
Pyroxene	= 1·02	
	100·16	

This gives the ratio, SiO^2 : RO : H^2O

1 1·25 1·1

Under the circumstances, that is, in view of the microscope showing the admixture of an isometric or amorphous body, this ratio is sufficient to establish the material as a Serpentine.

Associated with the Serpentine, besides the minerals already mentioned, is a light grayish fibrous mineral. This is composed of Calcite and two Silicates, a silicate decomposable by Hcl (probably equal to the above serpentine), and a silicate insoluble in Hcl, which is probably a pyroxene. Several analyses have been made without establishing the nature satisfactorily.

On Miocene Fossils from Southern New Jersey.—Prof. HEILPRIN called attention to a limited collection of fossils from near Bridgeton and Jericho, Cumberland Co., New Jersey, representing the Miocene formation of that State. The species identified were: *Terebra curvilirata*, *Turritella æquistriata*, *Turritella Cumberlandia*, *Trochita centralis*, *Fissurella Griscomi*, *Chama congregata*, *Astarte distans* (*undulata*), *Crassatella melina*, *Arca centenaria*, *Nucula obliqua* (*proxima*), *Perna maxillata*, *Pecten Madisonius*, *Pecten* sp. ? *Orbicula lugubris*.

A number of these forms—nearly one-half—had not been identified in the State before, although fairly abundant in the Miocene tract of the region to the south. They are therefore interesting as bearing directly upon the question of horizon which the scantily-represented Miocene fauna of New Jersey indicates. The speaker stated that in his work, "Contributions to the Tertiary Geology and Paleontology of the United States" (1884), he had suggested that the probable position of the deposits in question would be found to be in the "Marylandian" series—Lower Atlantic Miocene—a view sustained by the additional fossils that have now been brought to light.

On the Helictites of Luray Cave.—Dr. CHARLES S. DOLLEY remarked that during a recent visit to the celebrated Luray Caverns his attention was called to the peculiar branching stalactites known as helictites (ἕλιξ, a spiral), and the question arose as to the method by which a stalactite gives off a horizontal branch at right angles; this branch in its turn perhaps sending out twigs at greater or lesser angles, and at varying degrees of inclination.

For a better opportunity of studying this interesting phenomenon he was permitted to visit in company with Dr. Leidy a chamber seldom opened to inspection, and which, from the delicate and fantastic character of its limy deposits, has been called the "Toy Shop." Here the stalactites were found to be of very recent formation, small, hollow, and increasing rapidly. Many branching specimens, or helictites, in all stages of growth, were to be seen. After some time spent in a vain search for an explanation of this anomalous structure, he happened to notice two specimens, the incipient branches of which were directed towards each other; stretched tightly between the branches, and entering